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$$\frac{[\exp(eFR/kT) - 1] \exp[-(eFR + \lambda)^2/4\lambda kT]}{[\exp(eFR/kT) + 1] \exp[-(eFR + \lambda)^2/4\lambda kT]}.$$

$$\langle \cos \Theta \rangle = \frac{\exp(eFR/kT) - 1}{\exp(eFR/kT) + 1}.$$

(D.3)

or

$$\langle \cos \Theta \rangle = \tanh(eFR/2kT).$$

(D.4)

In a cube lattice where the applied field coincides with one of the axes the net rate constant for forward electron transfer is the rate constant for forward and backward electron transfer while the rate constant for backward electron transfer is the sum of the rate constants for electron transfer in both directions. When each of those expressions is given by the Marcus equation one obtains as $\Delta E^0 = 0$ for the electron transfer along the axes perpendicular to the applied field,

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the mixed-order description (Scheme 5) as more

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breaking of the K₆₀—S hydrogen bond leads to rapid intramolecular re-orientation K₆₀—S

$$k_2(\text{DDE}) = (k_1/d)/k_1/(k_1 + k_{-1} + k_{-2} + k_{-3}) \quad (4)$$

Presumably, the complex ¹K₆₀—R₆₀—S (which is similar to complex A in Scheme 1) is lower in energy than the encounter complex because the hydrogen bond between the NH group of the ketone and the carboxyl

